

AMENDMENTS TO THE CLAIMS

The following listing of claims shall replace all prior listings, and versions, of claims in this application.

Listing of Claims:

Claim 1 (currently amended) An electrically actuated parking brake system comprising:
a vehicle power source;

an electromechanical actuator comprising a motor having a drive shaft, a drive gear coupled to said drive shaft, a driven gear coupled to said drive gear, said drive gear and said driven gear comprising a worm gear and a worm wheel in meshing engagement, and at least one planetary gear set coupled to said driven gear for driving an actuator output; and

a brake caliper coupled to said actuator output, said actuator output being configured for driving said brake caliper between an engaged position and a released position.

Claim 2 (canceled)

Claim 3 (currently amended) ~~The system according to claim 1,~~ An electrically actuated parking brake system comprising:

a vehicle power source;

an electromechanical actuator comprising a motor having a drive shaft, a drive gear coupled to said drive shaft, a driven gear coupled to said drive gear, wherein said drive gear and said driven gear are coupled via a drive belt, and at least one planetary gear set coupled to said driven gear for driving an actuator output; and

a brake caliper coupled to said actuator output, said actuator output being configured for driving said brake caliper between an engaged position and a released position.

Claim 4 (currently amended) ~~The system according to claim 1,~~ An electrically actuated parking brake system comprising:

a vehicle power source;

an electromechanical actuator comprising a motor having a drive shaft, a drive gear coupled to said drive shaft, a driven gear coupled to said drive gear, and at least one planetary gear set coupled to said driven gear for driving an actuator output said actuator further comprising a component isolator having a spring constant and a damping constant, said isolator coupled between said motor and a remainder of said actuator; and

a brake caliper coupled to said actuator output, said actuator output being configured for driving said brake caliper between an engaged position and a released position.

Claim 5 (currently amended) The system according to claim 4, wherein said component isolator comprises a first portion and a second portion, and said first portion is coupled to a first end of said motor and a said second portion is coupled to a second end of said motor.

Claim 6 (canceled)

Claim 7 (currently amended) ~~The system according to claim 6,~~ An electrically actuated parking brake system comprising:

a vehicle power source;

an electromechanical actuator comprising a motor having a drive shaft, a drive gear coupled to said drive shaft, a driven gear coupled to said drive gear, at least one planetary gear set coupled to said driven gear for driving an actuator output, and a sub-frame, said motor being mounted on said sub-frame, said actuator further comprising a component isolator having a spring constant and a damping constant, said isolator coupled between said motor and said sub-frame; and

a brake caliper coupled to said actuator output, said actuator output being configured for driving said brake caliper between an engaged position and a released position.

Claim 8 (currently amended) ~~The system according to claim 6,~~ An electrically actuated parking brake system comprising:

a vehicle power source;

an electromechanical actuator comprising a motor having a drive shaft, a drive gear coupled to said drive shaft, a driven gear coupled to said drive gear, and at least one planetary gear set coupled to said driven gear for driving an actuator output, and a sub-frame, said motor being mounted on said sub-frame and ~~wherein~~ said at least one planetary gear set is mounted on said sub-frame; and

a brake caliper coupled to said actuator output, said actuator output being configured for driving said brake caliper between an engaged position and a released position.

Claim 9 (original) The system according to claim 8, further comprising a component isolator having a spring constant and a damping constant, said isolator coupled between said at least one planetary gear set and said sub-frame.

Claim 10 (currently amended) ~~The system according to claim 6,~~ An electrically actuated parking brake system comprising:
a vehicle power source;
an electromechanical actuator comprising a motor having a drive shaft, a drive gear coupled to said drive shaft, a driven gear coupled to said drive gear, at least one planetary gear set coupled to said driven gear for driving an actuator output, and a sub-frame, said motor being mounted on said sub-frame, said actuator further comprising a sub-frame isolator having a spring constant and a damping constant, said isolator coupled between said sub-frame and a remainder of said actuator; and
a brake caliper coupled to said actuator output, said actuator output being configured for driving said brake caliper between an engaged position and a released position.

Claim 11 (currently amended) ~~The system according to claim 1,~~ An electrically actuated parking brake system comprising:
a vehicle power source;
an electromechanical actuator comprising a motor having a drive shaft, a drive gear coupled to said drive shaft, a driven gear coupled to said drive gear, and at least one planetary gear set coupled to said driven gear for driving an actuator output, and further comprising an actuator housing defining a motor cavity receiving at least a portion of said motor and a covering

member disposed adjacent said motor cavity, thereby separating said motor from a remainder of said actuator; and

a brake caliper coupled to said actuator output, said actuator output being configured for driving said brake caliper between an engaged position and a released position.

Claim 12 (original) The system according to claim 11, wherein said covering member comprises a sub-frame.

Claim 13 (currently amended) An electro-mechanical actuator comprising:
a motor having a drive shaft;
a gear train coupled to said drive shaft for driving an output of said actuator, said gear train comprising a driven gear coupled to a planetary gear set; and
a sub-frame, said motor and ~~at least a portion of said drive train~~ at least one of said driven gear and said planetary gear set being mounted on said sub-frame.

Claim 14 (canceled)

Claim 15 (currently amended) The electromechanical actuator according to ~~claim~~ claim 13, further comprising an actuator housing defining a planetary gear set cavity receiving at least a portion of said planetary gear set, wherein cooperation between said housing and said sub-frame ~~separating~~ separate said planetary gear set from a remainder of said actuator.

Claim 16 (currently amended) ~~The electro-mechanical actuator according to claim~~
~~13,~~ An electro-mechanical actuator comprising:

a motor having a drive shaft;
a gear train coupled to said drive shaft for driving an output of said actuator;
a sub-frame, said motor and at least a portion of said drive train being mounted on said
sub-frame; and

~~further comprising~~ an actuator housing, said housing defining a motor cavity receiving at
least a portion of said motor, wherein cooperation between said housing and said sub-frame
separate said motor from a remainder of said actuator.

Claim 17 (original) The electromechanical actuator according to claim 16, further
comprising a first motor isolator having a spring constant and a damping constant, said isolator
disposed between said sub-frame and said motor.

Claim 18 (original) The electromechanical actuator according to claim 17, further
comprising a second motor isolator having a spring constant and a damping constant, said
isolator disposed between said motor and said housing.

Claim 19 (currently amended) ~~The electromechanical actuator according to claim~~
~~13,~~ An electro-mechanical actuator comprising:

a motor having a drive shaft;
a gear train coupled to said drive shaft for driving an output of said actuator;

a sub-frame, said motor and at least a portion of said drive train being mounted on said sub-frame; and

~~further comprising~~ a sub-frame isolator having a spring constant and a damping constant, said isolator disposed between said sub-frame and an actuator housing.

Claim 20 (original) An electrically actuated parking brake system comprising:

a vehicle power source;

an actuator comprising a motor having a drive shaft coupled to a drive pulley, a driven pulley coupled to said drive pulley via a drive belt, and a planetary gear set coupled to said driven pulley for driving an output of said actuator, at least said motor and planetary gear set mounted on a sub-frame, and a component isolator having a spring constant and a damping constant disposed between said sub-frame and an actuator housing; and

a brake caliper coupled to said actuator output, said actuator output being configured for driving said brake caliper between an engaged position and a released position.

Claim 21 (original) The system according to claim 20, said actuator housing comprising a motor isolation cavity receiving at least a portion of said motor, wherein said sub-frame cooperates with said housing to separate said motor from at least one of said drive gear, driven gear and said planetary gear set.

Claim 22 (original) The system according to claim 20, further comprising a motor isolator having a spring constant and a damping constant, said motor isolator disposed between said motor and said mounted plate.

Claim 23 (original) A method of assembling an actuator comprising:
mounting a motor and a gear train to a sub-frame;
coupling said sub-frame to a portion of an actuator housing to at least partially enclose
said motor in a motor isolation cavity defined by said portion of said actuator housing and said
sub-frame.

Claim 24 (original) A method according to claim 23, said method further comprising:
coupling a second sub-frame to said sub-frame to enclose at least a portion of said gear train in a
cavity defined by said sub-frame and said second sub-frame.

Claim 25 (original) A method according to claim 24, said method further comprising:
coupling a second portion of said actuator housing to said portion of said actuator housing to
enclose said sub-frame and said second sub-frame at least partially within said actuator housing.

Claim 26 (original) A method according to claim 23, said method further comprising:
providing at least one motor isolation bushing between said portion of said actuator housing and
said motor.

Claim 27 (original) A method according to claim 23, said method further comprising:
providing a first motor isolation bushing between said portion of said actuator housing and said
motor; and

providing a second motor isolation bushing between said sub-frame and said motor.

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Claim 28 (original) A method according to claim 23, said method further comprising:
providing at least one isolation bushing between said portion of said actuator housing and said
sub-frame.